

Maths Champions Case Study

Champion: Anna Wilby

Setting: Thornhill Lees Infant & Nursery School

INTENT

Introduction

A little bit about your setting, why you joined the programme and what you wanted to achieve from it.

I have been at Thornhill Lees for 18 years and have recently moved back to teaching nursery after teaching different year groups. Our school has a 2 Year provision which takes funded and non-funded places. In addition we have an 80 place nursery which places 40 morning and 40 afternoon children for 15 hours only per week. In Reception we have 3 classes that place 30 children in each class.

Most of our children have English as an additional language, many children having up to three languages spoken at home. The majority of our children enter the setting below their age-related expectations in most areas of the EY curriculum. Many not having varied life experiences due to a number of factors.

The Maths Champion programme was a great way for our staff to gain confidence and make positive changes to the way we carry out activities, question and develop mathematical skills for our children that will be embedded and carried throughout their school journey. Staff were keen to enhance their own skills and develop our mathematics teaching and learning within the setting. We were keen to learn new ideas and refresh our way of teaching new skills and concepts.

As nursery leader I was nominated as maths champion. Deputy maths champion Faatimah Hafijee works alongside myself and also works within Reception. This has been useful when sharing and implementing new ideas.

How did you decide what to do?

*What did the audits highlight, what changes did you consider and how did you identify the change/s to be made?
Did the changes you considered come from the online training or resources etc?*

Together, we decided that it was important for both the maths champion and deputy maths champion to complete the online training. We were fortunate to be able to complete this together. We found this beneficial as we were able to discuss new ideas and further discuss how we can make changes in our own setting. We spent time on looking at different ways of implementing activities that were developmentally appropriate for all areas of our Early Years setting and were keen on sharing these ideas with others within school.

From many aspects of the training modules we decided it was important to share our knowledge with the wider team and share our ideas and observations.

We carried out our environmental audit and our staff confidence audit following the training. We were then able to highlight the areas we felt we needed to include in our action plans. This involved areas such as routes, positional and directional language. The main area for staff was 'interesting' and open-ended questioning when in many areas of our provision. From this we made the action plan to improve these areas. We have long standing members of staff and new staff in our setting. We decided that it would be beneficial to have refresher training in some areas and then newer staff could receive some coaching opportunities.



IMPLEMENTATION

What did you change or implement?

Outline a positive change, or changes, that have taken place as a result of being part of the Maths Champions programme. How did you plan for it and what did you do? How did you plan to assess the benefit of the change on staff practice and children's experiences?

Initially we looked at all the notes from our online training and created a list of activities and ideas we wanted to carry out. After looking at the core activities we also listed everything we would need. What are the changes we can make now? We looked more in depth at other activities and made a plan of what we needed to do in preparation for implementation.

We then got to work looking at our resources. What have we already got? What would we like/need? Together we created a wish list and also asked for donations from our parents and local companies.

Snack time was one of the areas we were able to change quicker than others as we already had many resources. We discussed this area in our meeting and decided to plan a 'routine' for snack time. How will this happen daily? What specific skills do we want the children to practice? What questions would we ask? Children were then able to practice their measuring skills, were given more opportunities to count and subitise. Spending a few extra minutes daily, this activity went from good to great!

Following this, we looked at all our actions plans and developed different areas during each meeting we had. Time was set aside to look at different areas of the provision and the resources we had. The team discussed activity ideas and the areas we wanted to develop in each. (Such as pattern in our collage area etc.) We then made this a focus, creating resources, questioning posters for adults and writing a bank of activities for each of the areas.

We were also quickly able to place number lines with dots around our indoor and outdoor provision areas. The children were and are still very interested in these and use them frequently. We then decided to have these feature in our group time where we revisit different numbers daily as part of our school maximising memory focus.

As a team, working through the core activities and action plans has helped each individual gain their confidence in questioning and delivering activities. Some of our long-standing members were able to help our newer members gain confidence. We were all very open as a team to improve and were honest in how we would like to develop our skills and the development of the nursery and the skills of the children.

IMPACT

The success and benefit of what you did:

For children

What has been the impact of the changes on children's learning and development? How has being involved in the programme made a difference for children in your nursery?

There have been many positives that the programme has had on the children's learning and development. Not only maths skills have been developed, communication and language and PSED skills have also improved.

The children are now using a wider range of mathematical language related to make different areas (measures, pattern etc) and this is used confidently in context.

Children are becoming more independent when problem solving. The adults have enabled the children to feel confident following their own ideas to try and solve problems rather than always asking an adult for a 'solution'. Previously children would ask 'Can you do this for me'. Now adults are ensuring they help children try and solve their own problems to develop their mathematical thinking.

For families

What has been the impact of the changes on families? How has being involved in the programme made a difference for families whose children attend your nursery?

Staff have given parents tools to help children at home with different mathematical concepts. Activities have been demonstrated and explained to parents through the school app and through parents open sessions. Parents have said they feel more involved and now see how mathematics can be adapted in many different real life activities – whether this is setting the table for dinner or counting cars on the way to school.

For staff

How has being involved in the programme made a difference to your staff team/individual practitioners? What has been the impact on their practice?

Staff now feel more confident when questioning children, especially with open-ended questions. Some staff have said that the meetings and coaching they have had has deepened their own understanding of different maths concepts and terminology.

It has been helpful for practitioner working across year groups to see progression and plan for developmentally appropriate activities for each of their groups.

Mainly staff feel like their questioning, routines and planning in terms of the maths champion programme is well embedded in most areas.

For the Maths Champion and Deputy Maths Champion

How has the programme helped you as Maths Champion and Deputy Maths Champion to develop your own practice? What has been the impact on your practice?

It has developed the way in which the children are questioned and encouraged to solve problems without giving too much support.

It has also given us the confidence to reflect and say how we would like to improve our own practice and setting along with supporting others through this journey. It has embedded the key concepts and 'meaning' behind lots of activities and enabled us to step back and see a clear picture of what really happens within our setting.

For the setting

What has been the impact on your environment?

Our setting is now more exciting for children. There are more activities and resources for the children to develop different mathematical skills. There are a lot more opportunities for children to learn and develop these skills.

Next steps

What further improvements might you make and how will you continue to monitor the quality of maths opportunities within the setting?

We will continue to monitor our audits and ensure that our section of meeting time is kept as 'maths champion' time. We will continue to carry out the core activities and also further embed some of the skills and activities we feel need a little more development.